REMARKS

This is a response to the non-final Office Action mailed November 30, 2004.

Claims 1, 3, 4 and 10-12 have been amended. Claim 2 has been cancelled, and its subject matter has been incorporated into claims 1, 11 and 12.

The specification is amended to correct a typographical error.

Applicants acknowledge the comments in paragraph 1 of the Office Action and will consider submitting an IDS in due course.

Claims 1, 4, 5, 7-9, 11 and 12 have been rejected under 35 U.S.C. §101 as lacking utility. Without conceding to the propriety of the rejection, the claims have been amended to improve clarity. Moreover, having established that each of the independent claims meets the requirements of 35 U.S.C. §101, the dependent claims thereof must also meet the requirements of 35 U.S.C. §101.

Withdrawal of the rejection is therefore respectfully requested.

Claims 1-12 have been rejected under 35 U.S.C. §103(a) as being obvious over the "admitted prior art" in view of U.S. patent 6,134,537 to Pao et al. Applicants respectfully traverse the rejection.

The Examiner asserts that pages 3-7 of the specification include a discussion of prior art. While Fig. 1 is identified as prior art by the Applicants, note that the discussion of the problems associated with the prior art classifier 100 of Fig. 1, starting at page 6, line 31 and continuing to page 7, does not comprise prior art, and is not identified as such by Applicants. MPEP 2129(II).

Pao et al. discuss a technique for self-organizing multi-dimensional data using equalized orthogonal mapping. However, Pao et al. only discuss Principal Component Analysis (PCA) in

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the background section as part of the evolution leading up to their subject invention (col. 2, lines 7-10). PCA is not discussed anywhere in the summary or detailed description sections. Instead, Pao et al. discuss that the hidden layer or hidden nodes of a neural network 100 "can be a non-linear functional transformation layer, such as practiced in the functional link, and radial basis function architectures." (col. 9, lines 50-52). Thus, Pao et al. merely repeat the information acknowledged in Applicants' Fig. 1 relating to the known use of radial bias functions in the hidden layer of a neural network (page 3, lines 21 and 22; page 7, lines 18-20).

Regarding the passages in Pao et al. cited by the Examiner, col. 3, line 62 refers to neural-net implementations of PCA, but provides no details of any specific implementation, and certainly no disclosure or suggestion of the specific features set forth in Applicants' claims. Col. 6, lines 24-26 refers to the desirability of a neural network for organizing pattern data efficiently, but, as discussed above, the technique of Pao et al. does not use PCA in its neural network. Thus, contrary to the Examiner's assertion, this passage does not mention PCA or provide any teaching regarding PCA. As discussed above, col. 9, lines 50-52 refers to the fact that the hidden layer of the neural network 100 can be a non-linear functional transformation layer, such as practiced in the functional link, and radial basis function (RBF) architectures. There is no disclosure or suggestion that PCA is compatible with an RBF architecture, as asserted by the Examiner.

Accordingly, the teachings of Pao et al. in combination with the "admitted prior art" would not lead one of ordinary skill in the art to the invention set forth in Applicants' claims.

Withdrawal of the rejection to the independent claims is therefore respectfully requested.
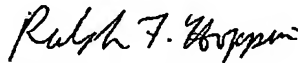
Furthermore, the dependent claims recite further patentable features. However, the Examiner has not indicated how the features of the dependent claims are disclosed or suggested

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by the prior art. The Office has therefore not met its burden to set forth a *prima facie* conclusion of obviousness. MPEP 2142.

Withdrawal of the rejection to the dependent claims is also therefore respectfully requested.

In view of the above, it is respectfully submitted that this application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is requested to telephone the undersigned.

Respectfully submitted,

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